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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,085	10/31/2003	Takao Nireki	SHO-0053	9736

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EXAMINER
MILLER, PATRICK L

ART UNIT	PAPER NUMBER
2837	

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H·A

Office Action Summary	Application No.	Applicant(s)	
	10/697,085	NIREKI ET AL.	
	Examiner	Art Unit	
	Patrick Miller	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2 and 4-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,4-6 and 8-11* is/are rejected.

7)☒ Claim(s) *7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 June 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12092004; 04202005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 4-6 are objected to because of the following informalities: see bullet(s) below. Appropriate correction is required.

   - Claims 4 and 5 recite, "a number" (l. 3). It is unclear to what this term refers. For examination purposes, the Examiner has interpreted this term as "a number of phases." Please correct and/or clarify.
   - Claim 5 recites, "a number (l. 3). It is unclear whether this term is the same as that cited in claim 4. Please clarify.
   - Claim 5 recites, "a predetermined time interval" (l. 3). It is unclear whether this term is the same as that recited in claim 4. Please clarify.
   - Claim 6 recites, "an oil dumper" (l. 2). The Examiner believes this term should be an "oil damper."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (JP 2003-117076) in view of Inoue (2004/0018869), Yamamoto (4,765,078), and Murakami (JP 09327553).

- With respect to claim 2, Watanabe et al. disclose a control device for a rotating reel type gaming machine that includes a motor having two pairs of excitation phases as a driving source of a reel, the reel having a plurality of symbols (Figs. 1 and 4); a motor stop control means that performs stop control through two-phase excitation after performing a control for reducing the speed of the motor based on a stop command (abstract; [0008]-[0009]; Fig. 5; stop signal initiates braking by two-phase excitation from T1 to T2); the motor is a stepping motor (Basic-Abstract).
- Watanabe et al. do not disclose a deceleration transmission mechanism as described in claim 2, a vibration-suppressing member, and the speed reduction ratio is determined by a ratio between a number of steps of one rotation of the motor, and the least common multiple calculated from a number of the symbols drawn on the reel and the number of steps of the motor.
- Inoue disclose a deceleration transmission mechanism used with a stepper motor (Fig. 2, #10 used with #13), and said mechanism has an output-side gear provided on a driving

side of the stepping motor (Fig. 3, #15), an input-side gear disposed at the reel (Fig. 3, #22), and the input-side gear contacts the output-side gear and is coaxial with the rotating shaft of the reel (Fig. 3, #22 contacts #15 and the input-side gear is coaxial with the rotating shaft of the reel; see Fig. 2, #22 coaxial with #24; see also Figs. 9 and 10, different embodiment, but #52 represents the output-side, #60 represents the input side). The motivation to use a deceleration transmission mechanism as described above is to reduce the thickness of the device ([0011]-[0017]). This provides the advantage of reducing the amount of space taken up by the device.

- Yamamoto discloses a vibration-suppressing member (Fig. 2, #24). The motivation to use a vibration-suppressing member is to provide the advantage of preventing the reel assembly from joggling in the rotation direction when the motor stops (col. 3, ll. 3-10).
- Murakami discloses the speed reduction ratio is determined by a ratio between the number of steps of one rotation of the motor; and the least common multiple calculated from a number of symbols drawn on the reel and the number of steps of the motor (abstract; "Solution"). The motivation to determine the speed reduction ratio in this matter is to provide the advantage of implementing a less complex means for accurately stopping the device and determining the "stopped on" symbol (abstract; "Problem to be Solved").
- Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the device of Watanabe et al. so that a deceleration transmission mechanism is between the motor and the output shaft, thereby providing the advantage of reducing the amount of space taken up by the device, as taught by Inoue.

Additionally, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the device of Watanabe et al. with a vibration-suppressing member, thereby providing the advantage of preventing the reel from joggling in the rotation direction when the motor stops, as taught by Yamamoto. Finally, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the device of Watanabe et al. so that the speed reduction ratio is determined by a reduction ratio as disclosed above, thereby providing the advantage of implementing a less complex means for accurately stopping the device and determining the "stopped on" symbol, as taught by Murakami.

- With respect to claims 4 and 5, Watanabe et al. disclose reducing the rotating speed of the motor by transmitting pulses in two-phase excitation corresponding to a predetermined time interval (Fig. 5, two-phase excitation during time T1).

3. Claims 2, 4, 5, 6, 8, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue (2004/0018869) in view of Watanabe et al. (JP 2003-117076), Murakami (JP 09327553), and Dickinson et al. (4,711,452) or Tamura et al. (4,625,931).

- With respect to claim 2, Inoue discloses a motor stop control device for a gaming machine that includes a stepping motor to drive a reel (Fig. 2, #13); the reel has a plurality of symbols in it (Fig. 1, #24); the stop control device comprising: a decelerating transmission mechanism that the rotation of the motor shaft so that the reel is rotated at a predetermined speed reduction ratio (Fig. 2, #10), where said mechanism has an output-side gear on a driving side of the stepper motor (Fig. 3, #15) and an input-side gear disposed at the reel (Fig. 3, #22), where the input-side gear contacts the output-side gear

and is coaxial with the rotating shaft of the reel (Fig. 3, #22 contacts #15 and the input-side gear is coaxial with the rotating shaft of the reel; see Fig. 2, #22 coaxial with #24; see also Figs. 9 and 10, different embodiment, but #52 represents the output-side, #60 represents the input side).

- Inoue does not disclose a motor stop control means that performs stop control of the motor through two-phase excitation after performing a control for reducing the rotating speed of the motor based on a stop command and the speed reduction ratio is determined by a ratio between a number of steps of one rotation of the motor, and the least common multiple calculated from a number of the symbols drawn on the reel and the number of steps of the motor. Additionally, with respect to claims 2, 8, 9, and 10, Inoue discloses a washer that helps to secure the reel to the transmission mechanism, but does not disclose a vibration suppressing member that dampens vibrations of the reel that occur when the reel is stopped (claim 2); the suppressing member is a high-friction member (claim 8); the high-friction member is a wave washer (claim 10); or the high-friction member is felt (claim 9).
- Watanabe et al. disclose a motor stop control means that performs stop control through two-phase excitation after performing a control for reducing the speed of the motor based on a stop command (abstract; [0008]-[0009]; Fig. 5; stop signal initiates braking by two-phase excitation from T1 to T2). The motivation to perform stop control as described is to improve the accuracy in controlling the stop of the reel (Abstract).
- Murakami discloses the speed reduction ratio is determined by a ratio between the number of steps of one rotation of the motor; and the least common multiple calculated

from a number of symbols drawn on the reel and the number of steps of the motor (abstract; "Solution"). The motivation to determine the speed reduction ratio in this matter is to provide the advantage of implementing a less complex means for accurately stopping the device and determining the "stopped on" symbol (abstract; "Problem to be Solved").

- With respect to claims 2, 8, and 10, Dickinson et al. disclose a wave washer (Fig. 12, #377) that provides the advantage of suppressing oscillations of a reel when the reel is stopped (col. 17, ll. 48-58). In the alternative, with respect to claims 2, 8, and 9, Tamura et al. disclose a felt washer that is used to ensure smooth rotation (suppress vibrations) and to prevent wear (abstract) or with respect to claims 2 and 6, Tamura et al. disclose a spring, which suppresses vibrations, is inserted into a rotating shaft, and exerts an "inward" force onto a roll, which provides the advantage of improving stability (Fig. 2, #15 forces #9 inward). Additionally, with respect to claim 6, Inoue disclose a mounting plate (Fig. 2, #16 or #23) and the input-side gear is inserted into the rotating shaft (Fig. 2, #22, #28 into #17).
- Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to stop the motor in the device of Inoue through two-phase excitation after performing a control for reducing the rotating speed of the motor based on a stop command for the motor, thereby providing the advantage of improving the accuracy in which the reels are stopped, as taught by Watanabe et al. Also, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the device of Inoue so that the speed reduction ratio is determined by a reduction ratio as

disclosed by Murakami above, thereby providing the advantage of implementing a less complex means for accurately stopping the device and determining the "stopped on" symbol, as taught by Murakami. Additionally, it would have been obvious to one having ordinary skill in the art at the time of the invention that the washer of Inoue could be replaced either with a wave washer which would provide the advantage of suppressing oscillations, as taught by Dickinson et al, or a felt washer, which would provide the advantages of ensuring smooth rotation and preventing wear, as taught by Tamura et al. Finally, it would have been obvious to one having ordinary skill in the art at the time of the invention that the washer of Inoue could be also be replaced with a spring, thereby providing the advantage of preventing oscillations and improving reel stability, as taught by Tamura et al.

- With respect to claims 4 and 5, Watanabe et al. disclose reducing the rotating speed of the motor by transmitting pulses in two-phase excitation corresponding to a predetermined time interval (Fig. 5, two-phase excitation during time T1).

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (JP 2003-117076) in view of Inoue (6,540,227) and Murakami (JP 09327553).

- With respect to claim 11, Watanabe et al. disclose a motor stop control device for a reel-type gaming machine which includes a motor having two pairs of excitation phases and the reel having a plurality of symbols (Figs. 1 and 4); the motor is stopped in response to an operational instruction ([0008]; "stop signal"); the motor stop control device comprising: a motor stop control means for reducing a rotational speed of the motor when a motor stop command is generated according to the operational stop command

(abstract; [0008]-[0009]; Fig. 5; stop signal initiates braking by two-phase excitation from T1 to T2).

- Watanabe et al. do not disclose a deceleration transmission mechanism and the speed reduction ratio is determined by a ratio between a number of steps of one rotation of the motor, and the least common multiple calculated from a number of the symbols drawn on the reel and the number of steps of the motor.
- Murakami discloses the speed reduction ratio is determined by a ratio between the number of steps of one rotation of the motor; and the least common multiple calculated from a number of symbols drawn on the reel and the number of steps of the motor (abstract; "Solution"). The motivation to determine the speed reduction ratio in this matter is to provide the advantage of implementing a less complex means for accurately stopping the device and determining the "stopped on" symbol (abstract; "Problem to be Solved").
- Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the device of Watanabe et al. so that a deceleration transmission mechanism is between the motor and the output shaft, thereby providing the advantage of more smoothly rotating the output shaft and thus, the load connected to the output shaft, as taught by Inoue. Additionally, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the device of Watanabe et al. so that the speed reduction ratio is determined by a reduction ratio as disclosed above, thereby providing the advantage of implementing a less complex means for accurately stopping the device and determining the "stopped on" symbol, as taught by Murakami.

Allowable Subject Matter

5. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

- With respect to claim 7, Nakatani et al. (JP 2004-141521) discloses an oil damper with a gaming machine. However, the Nakatani et al. publication date is not before the Applicant's priority date.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Miller whose telephone number is 571-272-2070. The examiner can normally be reached on M-F, 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2800 ext 41. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick Miller
Examiner
Art Unit 2837

pm
May 19, 2005

MARLON T. FLETCHER
PRIMARY EXAMINER